Claims

1. A pharmaceutical composition, comprising an agent which inhibits expression or activity of a tumor-associated antigen, said tumor-associated antigen having a sequence encoded by a nucleic acid which is selected from the group consisting of:
(a) a nucleic acid which comprises a nucleic acid sequence selected from the group consisting of SEQ ID NOs: 1-5, 19-21, 29, 31-33, 37, 39, 40, 54-57, 62, 63, 70, 74, 85-88, a part or derivative thereof,
(b) a nucleic acid which hybridizes with the nucleic acid of (a) under stringent conditions,
(c) a nucleic acid which is degenerate with respect to the nucleic acid of (a) or (b), and
(d) a nucleic acid which is complementary to the nucleic acid of (a), (b) or (c).

2. A pharmaceutical composition, comprising an agent with tumor-inhibiting activity, which is selective for cells expressing or abnormally expressing a tumor-associated antigen, said tumor-associated antigen having a sequence encoded by a nucleic acid which is selected from the group consisting of:
(a) a nucleic acid which comprises a nucleic acid sequence selected from the group consisting of SEQ ID NOs: 1-5, 19-21, 29, 31-33, 37, 39, 40, 54-57, 62, 63, 70, 74, 85-88, a part or derivative thereof,
(b) a nucleic acid which hybridizes with the nucleic acid of (a) under stringent conditions,
(c) a nucleic acid which is degenerate with respect to the nucleic acid of (a) or (b), and
(d) a nucleic acid which is complementary to the nucleic acid of (a), (b) or (c).

3. The pharmaceutical composition as claimed in claim 2, in which the agent causes induction of cell death, reduction in cell growth, damage to the cell membrane or secretion of cytokines.

4. The pharmaceutical composition as claimed in claim 1 or 2, in which the agent is an antisense nucleic acid which hybridizes selectively with the nucleic acid coding for the tumor-associated antigen.

5. The pharmaceutical composition as claimed in claim 1 or 2, in which the agent is an antibody which binds selectively to the tumor-associated antigen.

6. The pharmaceutical composition as claimed in claim 2, in which the agent is a complement-activating antibody which binds selectively to the tumor-associated antigen.

7. A pharmaceutical composition, comprising an agent which, when administered, selectively increases the amount of complexes between an HLA molecule and a tumor-associated antigen or a part thereof, said tumor-associated antigen having a sequence encoded by a nucleic acid which is selected from the group consisting of:
(a) a nucleic acid which comprises a nucleic acid sequence selected from the group consisting of SEQ ID NOs: 1-5, 19-21, 29, 31-33, 37, 39, 40, 54-57, 62, 63, 70, 74, 85-88, a part or derivative thereof,
(b) a nucleic acid which hybridizes with the nucleic acid of (a) under stringent conditions,
(c) a nucleic acid which is degenerate with respect to the nucleic acid of (a) or (b), and
(d) a nucleic acid which is complementary to the nucleic acid of (a), (b) or (c).

8. The pharmaceutical composition as claimed in claim

7, in which the agent comprises one or more components selected from the group consisting of:
(i) the tumor-associated antigen or a part thereof,
(ii) a nucleic acid which codes for the tumor-associated antigen or a part thereof,
(iii) a host cell which expresses the tumor-associated antigen or a part thereof, and
(iv) isolated complexes between the tumor-associated antigen or a part thereof and an HLA molecule.

9. The pharmaceutical composition as claimed in claim 1, 2 or 7, in which the agent comprises two or more agents which in each case selectively inhibit expression or activity of different tumor-associated antigens, which are in each case selective for cells expressing different tumor-associated antigens or which increase the amount of complexes between HLA molecules and different tumor-associated antigens or parts thereof, with at least one of said tumor-associated antigens having a sequence encoded by a nucleic acid which is selected from the group consisting of:
(a) a nucleic acid which comprises a nucleic acid sequence selected from the group consisting of SEQ ID NOs: 1-5, 19-21, 29, 31-33, 37, 39, 40, 54-57, 62, 63, 70, 74, 85-88, a part or derivative thereof,
(b) a nucleic acid which hybridizes with the nucleic acid of (a) under stringent conditions,
(c) a nucleic acid which is degenerate with respect to the nucleic acid of (a) or (b), and
(d) a nucleic acid which is complementary to the nucleic acid of (a), (b) or (c).

10. A pharmaceutical composition, comprising one or more components selected from the group consisting of:

(i) a tumor-associated antigen or a part thereof,
(ii) a nucleic acid which codes for a tumor-associated antigen or a part thereof,
(iii) an antibody which binds to a tumor-associated antigen or a part thereof,
(iv) an antisense nucleic acid which hybridizes specifically with a nucleic acid coding for a tumor-associated antigen,
(v) a host cell which expresses a tumor-associated antigen or a part thereof, and
(vi) isolated complexes between a tumor-associated antigen or a part thereof and an HLA molecule,
said tumor-associated antigen having a sequence encoded by a nucleic acid which is selected from the group consisting of:
(a) a nucleic acid which comprises a nucleic acid sequence selected from the group consisting of SEQ ID NOs: 1-5, 19-21, 29, 31-33, 37, 39, 40, 54-57, 62, 63, 70, 74, 85-88, a part or derivative thereof,
(b) a nucleic acid which hybridizes with the nucleic acid of (a) under stringent conditions,
(c) a nucleic acid which is degenerate with respect to the nucleic acid of (a) or (b), and
(d) a nucleic acid which is complementary to the nucleic acid of (a), (b) or (c).

11. The pharmaceutical composition as claimed in claim 8 or 10, in which the nucleic acid of (ii) is present in an expression vector.

12. The pharmaceutical composition as claimed in claim 8 or 10, in which the nucleic acid of (ii) is functionally linked to a promoter.

13. The pharmaceutical composition as claimed in claim 8 or 10, in which the host cell secretes the tumor-associated antigen or the part thereof.

14. The pharmaceutical composition as claimed in claim 8 or 10, in which the host cell additionally expresses an HLA molecule which binds to the tumor-associated antigen or the part thereof.

15. The pharmaceutical composition as claimed in claim 14, in which the host cell expresses the HLA molecule and/or the tumor-associated antigen or the part thereof in a recombinant manner.

16. The pharmaceutical composition as claimed in claim 14, in which the host cell expresses the HLA molecule endogenously.

17. The pharmaceutical composition as claimed in claim 8, 10, 14 or 16, in which the host cell is an antigen-presenting cell.

18. The pharmaceutical composition as claimed in claim 17, in which the antigen-presenting cell is a dendritic cell or a macrophage.

19. The pharmaceutical composition as claimed in any of claims 8, 10 and 13-18, in which the host cell is nonproliferative.

20. The pharmaceutical composition as claimed in claim 5 or 10, in which the antibody is a monoclonal antibody.

21. The pharmaceutical composition as claimed in claim 5 or 10, in which the antibody is a chimeric or humanized antibody.

22. The pharmaceutical composition as claimed in claim 5 or 10, in which the antibody is a fragment of a natural antibody.

23. The pharmaceutical composition as claimed in claim

5 or 10, in which the antibody is coupled to a therapeutic or diagnostic agent.

24. The pharmaceutical composition as claimed in claim 4 or 10, in which the antisense nucleic acid comprises a sequence of 6-50 contiguous nucleotides of the nucleic acid coding for the tumor-associated antigen.

25. The pharmaceutical composition as claimed in any of claims 8 and 10-13, in which the tumor-associated antigen or the part thereof, provided by said pharmaceutical composition, binds to MHC molecules on the surface of cells which express an abnormal amount of said tumor-associated antigen or of a part thereof.

26. The pharmaceutical composition as claimed in claim 25, in which the binding causes a cytolytic reaction and/or induces cytokine release.

27. The pharmaceutical composition as claimed in any of claims 1-26, further comprising a pharmaceutically acceptable carrier and/or an adjuvant.

28. The pharmaceutical composition as claimed in claim 27, in which the adjuvant is saponin, GM-CSF, CpG, cytokine or a chemokine.

29. The pharmaceutical composition as claimed in any of claims 1-28, which may be used for the treatment of a disease characterized by expression or abnormal expression of a tumor-associated antigen.

30. The pharmaceutical composition as claimed in claim 29, in which the disease is cancer.

31. The pharmaceutical composition as claimed 29, in which the disease is a lung tumor, a breast tumor, a prostate tumor, a melanoma, a colon tumor, a metastasis of a colon tumor, a kidney cell carcinoma or a cervical carcinoma, a colon carcinoma or a mammary carcinoma.

32. The pharmaceutical composition as claimed in any of claims 1-31, in which the tumor-associated antigen comprises an amino acid sequence selected from the group consisting of SEQ ID NOs: 6-13, 14-18, 22-24, 30, 34-36, 38, 41, 58-61, 64, 65, 71, 75, 80-84, 89-100, a part or derivative thereof.

33. A method of diagnosing a disease characterized by expression or abnormal expression of a tumor-associated antigen, which method comprises

(i) detection of a nucleic acid which codes for the tumor-associated antigen or of a part thereof, and/or

(ii) detection of the tumor-associated antigen or of a part thereof, and/or

(iii) detection of an antibody to the tumor-associated antigen or of a part thereof and/or

(iv) detection of cytotoxic or T helper lymphocytes which are specific to the tumor-associated antigen or to a part thereof in a biological sample isolated from a patient, with said tumor-associated antigen having a sequence encoded by a nucleic acid which is selected from the group consisting of:

(a) a nucleic acid which comprises a nucleic acid sequence selected from the group consisting of SEQ ID NOs: 1-5, 19-21, 29, 31-33, 37, 39, 40, 54-57, 62, 63, 70, 74, 85-88, a part or derivative thereof,

(b) a nucleic acid which hybridizes with the nucleic acid of (a) under stringent conditions,

(c) a nucleic acid which is degenerate with respect to the nucleic acid of (a) or (b), and

(d) a nucleic acid which is complementary to the nucleic acid of (a), (b) or (c).

34. The method as claimed in claim 33, in which the detection comprises

(i) contacting the biological sample with an agent which binds specifically to the nucleic acid coding for the tumor-associated antigen or to the part thereof, to the tumor-associated antigen or the part thereof, to the antibody or to the cytotoxic or T helper lymphocytes, and

(ii) detecting the formation of a complex between the agent and the nucleic acid or the part thereof, the tumor-associated antigen or the part thereof, the antibody or the cytotoxic or T helper lymphocytes.

35. The method as claimed in claim 33 or 34, in which the detection is compared to detection in a comparable normal biological sample.

36. The method as claimed in any of claims 33-35, in which the disease is characterized by expression or abnormal expression of two or more different tumor-associated antigens and in which detection comprises detection of two or more nucleic acids coding for said two or more different tumor-associated antigens or of parts thereof, detection of two or more different tumor-associated antigens or of parts thereof, detection of two or more antibodies binding to said two or more different tumor-associated antigens or to parts thereof or detection of two or more cytotoxic or T helper lymphocytes specific for said two or more different tumor-associated antigens.

37. The method as claimed in any of claims 33-36, in

which the nucleic acid or the part thereof is detected using a polynucleotide probe which hybridizes specifically to said nucleic acid or to said part thereof.

38. The method as claimed in claim 37, in which the polynucleotide probe comprises a sequence of 6-50 contiguous nucleotides of the nucleic acid coding for the tumor-associated antigen.

39. The method as claimed in any of claims 33-36, in which the nucleic acid or the part thereof is detected by selectively amplifying said nucleic acid or said part thereof.

40. The method as claimed in any of claims 33-36, in which the tumor-associated antigen to be detected or the part thereof are in a complex with an MHC molecule.

41. The method as claimed in claim 40, in which the MHC molecule is an HLA molecule.

42. The method as claimed in any of claims 33-36 and 40-41, in which the tumor-associated antigen or the part thereof is detected using an antibody binding specifically to said tumor-associated antigen or to said part thereof.

43. The method as claimed in any of claims 33-36, in which the antibody is detected using a protein or peptide binding specifically to said antibody.

44. A method for determining regression, course or onset of a disease characterized by expression or abnormal expression of a tumor-associated antigen, which method comprises monitoring a sample from a patient who has said disease or is suspected of falling ill with said disease, with respect to one

or more parameters selected from the group consisting of:

(i) the amount of nucleic acid which codes for the tumor-associated antigen or of a part thereof,

(ii) the amount of the tumor-associated antigen or of a part thereof,

(iii) the amount of antibodies which bind to the tumor-associated antigen or to a part thereof, and

(iv) the amount of cytolytic or cytokine-releasing T cells which are specific for a complex between the tumor-associated antigen or a part thereof and an MHC molecule, said tumor-associated antigen having a sequence encoded by a nucleic acid which is selected from the group consisting of:

(a) a nucleic acid which comprises a nucleic acid sequence selected from the group consisting of SEQ ID NOs: 1-5, 19-21, 29, 31-33, 37, 39, 40, 54-57, 62, 63, 70, 74, 85-88, a part or derivative thereof,

(b) a nucleic acid which hybridizes with the nucleic acid of (a) under stringent conditions,

(c) a nucleic acid which is degenerate with respect to the nucleic acid of (a) or (b), and

(d) a nucleic acid which is complementary to the nucleic acid of (a), (b) or (c).

45. The method as claimed in claim 44, which comprises determining the parameter(s) in a first sample at a first point in time and in a further sample at a second point in time and in which the course of the disease is determined by comparing the two samples.

46. The method as claimed in claim 44 or 45, in which the disease is characterized by expression or abnormal expression of two or more different tumor-associated antigens and in which monitoring comprises monitoring

(i) the amount of two or more nucleic acids

which code for said two or more different tumor-associated antigens or of parts thereof,
(ii) the amount of said two or more different tumor-associated antigens or of parts thereof,
(iii) the amount of two or more antibodies which bind to said two or more different tumor-associated antigens or to parts thereof, and/or
(iv) the amount of two or more cytolytic or cytokine-releasing T cells which are specific for complexes between said two or more different tumor-associated antigens or of parts thereof and MHC molecules.

47. The method as claimed in any of claims 44-46, in which the amount of the nucleic acid or of the part thereof is monitored using a polynucleotide probe which hybridizes specifically to said nucleic acid or said part thereof.

48. The method as claimed in claim 47, in which the polynucleotide probe comprises a sequence of 6-50 contiguous nucleotides of the nucleic acid coding for the tumor-associated antigen.

49. The method as claimed in any of claims 44-46, in which the amount of the nucleic acid or of the part thereof is monitored by selectively amplifying said nucleic acid or said part thereof.

50. The method as claimed in any of claims 44-46, in which the amount of the tumor-associated antigen or of the part thereof is monitored using an antibody binding specifically to said tumor-associated antigen or said part thereof.

51. The method as claimed in any of claims 44-46, in which the amount of antibodies is monitored using a protein or peptide binding specifically to the antibody.

52. The method as claimed in any of claims 44-46, in which the amount of cytolytic or cytokine-releasing T cells is monitored using a cell presenting the complex between the tumor-associated antigen or the part thereof and an MHC molecule.

53. The method as claimed in any of claims 37-38, 42-43, 47-48 and 50-52, in which the polynucleotide probe, the antibody, the protein or peptide or the cell is labeled in a detectable manner.

54. The method as claimed in claim 53, in which the detectable marker is a radioactive marker or an enzymic marker.

55. The method as claimed in any of claims 33-54, in which the sample comprises body fluid and/or body tissue.

56. A method of treating a disease characterized by expression or abnormal expression of a tumor-associated antigen, which method comprises administration of a pharmaceutical composition as claimed in any of claims 1-32, said tumor-associated antigen having a sequence encoded by a nucleic acid which is selected from the group consisting of:

(a) a nucleic acid which comprises a nucleic acid sequence selected from the group consisting of SEQ ID NOs: 1-5, 19-21, 29, 31-33, 37, 39, 40, 54-57, 62, 63, 70, 74, 85-88, a part or derivative thereof,

(b) a nucleic acid which hybridizes with the nucleic acid of (a) under stringent conditions,

(c) a nucleic acid which is degenerate with respect to the nucleic acid of (a) or (b), and

(d) a nucleic acid which is complementary to the nucleic acid of (a), (b) or (c).

57. A method of treating, diagnosing or monitoring a disease characterized by expression or abnormal expression of a tumor-associated antigen, which method comprises administering an antibody binding to said tumor-associated antigen or to a part thereof and coupled to a therapeutic or diagnostic agent, said tumor-associated antigen having a sequence encoded by a nucleic acid which is selected from the group consisting of:
(a) a nucleic acid which comprises a nucleic acid sequence selected from the group consisting of SEQ ID NOs: 1-5, 19-21, 29, 31-33, 37, 39, 40, 54-57, 62, 63, 70, 74, 85-88, a part or derivative thereof,
(b) a nucleic acid which hybridizes with the nucleic acid of (a) under stringent conditions,
(c) a nucleic acid which is degenerate with respect to the nucleic acid of (a) or (b), and
(d) a nucleic acid which is complementary to the nucleic acid of (a), (b) or (c).

58. The method as claimed in claim 42, 50 or 57, in which the antibody is a monoclonal antibody.

59. The method as claimed in claim 42, 50 or 57, in which the antibody is a chimeric or humanized antibody.

60. The method as claimed in claim 42, 50 or 57, in which the antibody is a fragment of a natural antibody.

61. A method of treating a patient having a disease characterized by expression or abnormal expression of a tumor-associated antigen, which method comprises:

(i) removing a sample containing immunoreactive cells from said patient,

(ii) contacting said sample with a host cell expressing said tumor-associated antigen or a part thereof, under conditions which favor production of cytolytic or cytokine-releasing T cells against said tumor-associated antigen or a part thereof, and

(iii) introducing the cytolytic or cytokine-releasing T cells into the patient in an amount suitable for lysing cells expressing the tumor-associated antigen or a part thereof, said tumor-associated antigen having a sequence encoded by a nucleic acid which is selected from the group consisting of:

(a) a nucleic acid which comprises a nucleic acid sequence selected from the group consisting of SEQ ID NOs: 1-5, 19-21, 29, 31-33, 37, 39, 40, 54-57, 62, 63, 70, 74, 85-88, a part or derivative thereof,

(b) a nucleic acid which hybridizes with the nucleic acid of (a) under stringent conditions,

(c) a nucleic acid which is degenerate with respect to the nucleic acid of (a) or (b), and

(d) a nucleic acid which is complementary to the nucleic acid of (a), (b) or (c).

62. The method as claimed in claim 61, in which the host cell recombinantly expresses an HLA molecule binding to the tumor-associated antigen or to a part thereof.

63. The method as claimed in claim 62, in which the host cell endogenously expresses an HLA molecule binding to the tumor-associated antigen or to a part thereof.

64. A method of treating a patient having a disease characterized by expression or abnormal expression

of a tumor-associated antigen, which method comprises:

(i) identifying a nucleic acid which is expressed by cells associated with said disease, said nucleic acid being selected from the group consisting of:

(a) a nucleic acid which comprises a nucleic acid sequence selected from the group consisting of SEQ ID NOs: 1-5, 19-21, 29, 31-33, 37, 39, 40, 54-57, 62, 63, 70, 74, 85-88, a part or derivative thereof,

(b) a nucleic acid which hybridizes with the nucleic acid of (a) under stringent conditions,

(c) a nucleic acid which is degenerate with respect to the nucleic acid of (a) or (b), and

(d) a nucleic acid which is complementary to the nucleic acid of (a), (b) or (c),

(ii) transfecting a host cell with said nucleic acid or a part thereof,

(iii) culturing the transfected host cell for expression of said nucleic acid, and

(iv) introducing the host cells or an extract thereof into the patient in an amount suitable for increasing the immune response to the patient's cells associated with the disease.

65. The method as claimed in claim 64, which further comprises identifying an MHC molecule presenting the tumor-associated antigen or a part thereof, with the host cell expressing the identified MHC molecule and presenting the tumor-associated antigen or a part thereof.

66. The method as claimed in claim 64 or 65, in which the immune response comprises a B cell response or a T cell response.

67. The method as claimed in claim 66, in which the immune response is a T cell response comprising

production of cytolytic or cytokine-releasing T cells which are specific for the host cells presenting the tumor-associated antigen or a part thereof or specific for cells of the patient which express the tumor-associated antigen or a part thereof.

68. The method as claimed in any of claims 61-67, in which the host cells are nonproliferative.

69. A method of treating a disease characterized by expression or abnormal expression of a tumor-associated antigen, which method comprises:
(i) identifying cells from the patient which express abnormal amounts of the tumor-associated antigen,
(ii) isolating a sample of said cells,
(iii) culturing said cells, and
(iv) introducing said cells into the patient in an amount suitable for triggering an immune response to the cells, said tumor-associated antigen having a sequence encoded by a nucleic acid which is selected from the group consisting of:
(a) a nucleic acid which comprises a nucleic acid sequence selected from the group consisting of SEQ ID NOs: 1-5, 19-21, 29, 31-33, 37, 39, 40, 54-57, 62, 63, 70, 74, 85-88, a part or derivative thereof,
(b) a nucleic acid which hybridizes with the nucleic acid of (a) under stringent conditions,
(c) a nucleic acid which is degenerate with respect to the nucleic acid of (a) or (b), and
(d) a nucleic acid which is complementary to the nucleic acid of (a), (b) or (c).

70. The method as claimed in any of claims 33-69, in which the disease is cancer.

71. A method of inhibiting the development of cancer in a patient, which method comprises administering an effective amount of a pharmaceutical composition as claimed in any of claims 1-32.

72. The method as claimed in any of claims 33-71, in which the tumor-associated antigen comprises an amino acid sequence selected from the group consisting of SEQ ID NOs: 6-13, 14-18, 22-24, 30, 34-36, 38, 41, 58-61, 64, 65, 71, 75, 80-84, 89-100, a part or derivative thereof.

73. A nucleic acid, selected from the group consisting of:
(a) a nucleic acid which comprises a nucleic acid sequence selected from the group consisting of SEQ ID NOs: 2-5, 20-21, 31-33, 37, 39, 54-57, 62, 63, 85-88, a part or derivative thereof,
(b) a nucleic acid which hybridizes with the nucleic acid of (a) under stringent conditions,
(c) a nucleic acid which is degenerate with respect to the nucleic acid of (a) or (b), and
(d) a nucleic acid which is complementary to the nucleic acid of (a), (b) or (c).

74. A nucleic acid, which codes for a protein or polypeptide comprising an amino acid sequence selected from the group consisting of SEQ ID NOs: 7-13, 14-18, 23-24, 34-36, 58-61, 64, 65, 89-100, a part or derivative thereof.

75. A recombinant DNA or RNA molecule, which comprises a nucleic acid as claimed in claim 73 or 74.

76. The recombinant DNA molecule as claimed in claim 75, which is a vector.

77. The recombinant DNA molecule as claimed in claim 76, in which the vector is a viral vector or a

bacteriophage.

78. The recombinant DNA molecule as claimed in any of claims 75-77, which further comprises expression control sequences controlling expression of the nucleic acid.

79. The recombinant DNA molecule as claimed in claim 78, in which the expression control sequences are homologous or heterologous to the nucleic acid.

80. A host cell, which comprises a nucleic acid as claimed in claim 73 or 74 or a recombinant DNA molecule as claimed in any of claims 75-79.

81. The host cell as claimed in claim 80, which further comprises a nucleic acid coding for an HLA molecule.

82. A protein or polypeptide, which is encoded by a nucleic acid as claimed in claim 73.

83. A protein or polypeptide, which comprises an amino acid sequence selected from the group consisting of SEQ ID NOs: 7-13, 14-18, 23-24, 34-36, 58-61, 64, 65, 89-100, a part or derivative thereof.

84. An immunogenic fragment of the protein or polypeptide as claimed in claim 82 or 83.

85. A fragment of the protein or polypeptide as claimed in claim 82 or 83, which binds to human HLA receptor or human antibody.

86. An agent, which binds specifically to a protein or polypeptide or to a part thereof, said protein or polypeptide being encoded by a nucleic acid selected from the group consisting of:
(a) a nucleic acid which comprises a nucleic acid

sequence selected from the group consisting of SEQ ID NOs: 1-5, 19-21, 29, 31-33, 37, 39, 40, 54-57, 62, 63, 70, 74, 85-88, a part or derivative thereof,

(b) a nucleic acid which hybridizes with the nucleic acid of (a) under stringent conditions,

(c) a nucleic acid which is degenerate with respect to the nucleic acid of (a) or (b), and

(d) a nucleic acid which is complementary to the nucleic acid of (a), (b) or (c).

87. The agent as claimed in claim 86, in which the protein or polypeptide comprises an amino acid sequence selected from the group consisting of SEQ ID NOs: 6-13, 14-18, 22-24, 30, 34-36, 38, 41, 58-61, 64, 65, 71, 75, 80-84, 89-100, a part or derivative thereof.

88. The agent as claimed in claim 86 or 87, which is an antibody.

89. The agent as claimed in claim 88, in which the antibody is a monoclonal, chimeric or humanized antibody or a fragment of an antibody.

90. An antibody, which binds selectively to a complex of:

(i) a protein or polypeptide or a part thereof and

(ii) an MHC molecule to which said protein or polypeptide or said part thereof binds, with said antibody not binding to (i) or (ii) alone and said protein or polypeptide being encoded by a nucleic acid selected from the group consisting of:

(a) a nucleic acid which comprises a nucleic acid sequence selected from the group consisting of SEQ ID NOs: 1-5, 19-21, 29, 31-33, 37, 39, 40, 54-57, 62, 63, 70, 74, 85-88, a part or derivative thereof,

(b) a nucleic acid which hybridizes with the nucleic acid of (a) under stringent conditions,
(c) a nucleic acid which is degenerate with respect to the nucleic acid of (a) or (b), and
(d) a nucleic acid which is complementary to the nucleic acid of (a), (b) or (c).

91. The antibody as claimed in claim 90, in which the protein or polypeptide comprises an amino acid sequence selected from the group consisting of SEQ ID NOs: 6-13, 14-18, 22-24, 30, 34-36, 38, 41, 58-61, 64, 65, 71, 75, 80-84, 89-100, a part or derivative thereof.

92. The antibody as claimed in claim 90 or 91, which is a monoclonal, chimeric or humanized antibody or a fragment of an antibody.

93. A conjugate between an agent as claimed in any of claims 86-89 or an antibody as claimed in any of claims 90-92 and a therapeutic or diagnostic agent.

94. The conjugate as claimed in claim 93, in which the therapeutic or diagnostic agent is a toxin.

95. A kit for detecting expression or abnormal expression of a tumor-associated antigen, which kit comprises agents for detection
(i) of the nucleic acid which codes for the tumor-associated antigen or of a part thereof,
(ii) of the tumor-associated antigen or of a part thereof,
(iii) of antibodies which bind to the tumor-associated antigen or to a part thereof, and/or
(iv) of T cells which are specific for a complex between the tumor-associated antigen or a part thereof and an MHC molecule, said tumor-associated antigen having a sequence encoded by a nucleic

acid which is selected from the group consisting of:

(a) a nucleic acid which comprises a nucleic acid sequence selected from the group consisting of SEQ ID NOs: 1-5, 19-21, 29, 31-33, 37, 39, 40, 54-57, 62, 63, 70, 74, 85-88, a part or derivative thereof,

(b) a nucleic acid which hybridizes with the nucleic acid of (a) under stringent conditions,

(c) a nucleic acid which is degenerate with respect to the nucleic acid of (a) or (b), and

(d) a nucleic acid which is complementary to the nucleic acid of (a), (b) or (c).

96. The kit as claimed in claim 95, in which the agents for detection of the nucleic acid which codes for the tumor-associated antigen or of a part thereof are nucleic acid molecules for selective amplification of said nucleic acid.

97. The kit as claimed in claim 96, in which the nucleic acid molecules for selective amplification of the nucleic acid comprise a sequence of 6-50 contiguous nucleotides of the nucleic acid which codes for the tumor-associated antigen.

98. A recombinant DNA molecule, comprising a promoter region which is derived from a nucleic acid sequence selected from the group consisting of SEQ ID NOs: 1-5, 19-21, 29, 31-33, 37, 39, 40, 54-57, 62, 63, 70, 74, 85-88.

99. A pharmaceutical composition, comprising an agent which inhibits expression or activity of the tumor antigen TPTE, SEQ ID NOs: 19, 22.

100. A pharmaceutical composition, comprising an agent which inhibits the migration activity and metastasizing activity of TPTE.

101. The agent as claimed in claim 99 or 100, which is an antibody.

102. The agent as claimed in claim 101, in which the antibody is a monoclonal, chimeric or humanized antibody or a fragment of an antibody.

103. An antibody, which binds to the extracellular protein regions comprising the sequences SEQ ID NOs: 81-82.

104. The agent as claimed in claim 99 or 100, which is an antisense nucleic acid hybridizing selectively with the nucleic acid coding for TPTE.

105. The agent as claimed in claim 104, in which the antisense nucleic acid comprises a sequence of 6-50 contiguous nucleotides of the nucleic acid coding for TPTE.

106. The agent as claimed in claim 99 or 100, which is RNA interference (RNAi).

107. The agent as claimed in claim 106, in which RNAi comprises a "short hairpin" structure (shRNA).

108. The agent as claimed in claim 107, in which shRNA are produced by transcription after transfection with expression vectors.

109. The agent as claimed in claim 107, in which shRNA is produced by transcription of retroviruses.

110. The agent as claimed in claim 107, in which shRNA is mediated by lentiviral systems.

111. The agent as claimed in claim 99 or 100, which is a small chemical molecule.

112. The agent as claimed in claim 111, in which the small chemical molecules bind to TPTE.

113. The agent as claimed in claim 112, in which the small chemical molecules bind to the extracellular regions comprising SEQ ID NO: 81-82.

114. A method of treating, diagnosing or monitoring a metastasizing tumor characterized by expression or abnormal expression of TPTE, which method comprises administering an antibody which binds to TPTE or to a part thereof and which is coupled to a therapeutic or diagnostic agent, said TPTE having a sequence encoded by a nucleic acid consisting of:

(a) a nucleic acid which is selected from a nucleic acid sequence comprising SEQ ID NO: 19, a part or derivative thereof,

(b) a nucleic acid which hybridizes with the nucleic acid of (a) under stringent conditions,

(c) a nucleic acid which is degenerate with respect to the nucleic acid of (a) or (b), and

(d) a nucleic acid which is complementary to the nucleic acid of (a), (b) or (c).

115. The method as claimed in claim 114, in which the antibody is a monoclonal antibody.

116. The method as claimed in claim 114, in which the antibody is a chimeric or humanized antibody.

117. The method as claimed in claim 114, in which the antibody is a fragment of a natural antibody.